

ABSTRACT

A positive electrode active material for a non-aqueous electrode secondary cell which comprises a composite oxide containing iron and sodium as main components, having a hexagonal crystal structure, and exhibiting a value obtained by dividing the intensity of a peak corresponding to an interplanar spacing of 2.20 \AA by the intensity of a peak corresponding to an interplanar spacing of 5.36 \AA of 2 or less in the X-ray diffraction analysis of said composite oxide; and a method for preparing the positive electrode active material wherein the above composite oxide is prepared by heating a metal compound mixture mainly containing a sodium compound and an iron compound in the temperature range of 400 to 900°C , which comprises heating the metal compound mixture in an inert atmosphere in the temperature range of less than 100°C on the way of the rise in the temperature. The use of the above active material allows the manufacture of a cell which is free from the rapid reduction of the discharge voltage with the progress of discharge.